

## CLAIMS

1. A method for selective measurement of triglycerides contained in very low density lipoprotein and intermediate density lipoprotein or in very low density lipoprotein in a test sample, comprising the following two steps:

a first step which comprises

1'. exposing and reacting the test sample to and with lipoprotein lipase and some other enzymes, which catalyze a series of reactions leading to the generation of hydrogen peroxide or a reduced coenzyme from glycerol, in the presence of a first selective reaction promoter, which is an ether or ester compound of a polyoxyalkylene capable of reacting lipoprotein lipase selectively with triglycerides contained in low density lipoprotein and high density lipoprotein, to generate hydrogen peroxide or a reduced coenzyme from the triglycerides contained in the low density lipoprotein and the high density lipoprotein in the test sample,

2'. reacting the hydrogen peroxide or reduced coenzyme generated by the reaction 1' with an enzyme which catalyzes a reaction leading to the conversion of hydrogen peroxide or a reduced coenzyme into another substance, and

3'. eliminating the triglycerides contained in the low density lipoprotein and the high density lipoprotein by the reactions of 1' and 2',

and

a second step which comprises

1'. subsequently, after the first step, reacting the test sample with lipoprotein lipase and some other enzymes, which catalyze a series of reactions leading to the generation of hydrogen peroxide or a reduced coenzyme from glycerol, in the presence of a second selective reaction promoter, which is capable of reacting lipoprotein lipase selectively with triglycerides contained in very low density lipoprotein, intermediate density lipoprotein, low density lipoprotein and high density lipoprotein, to generate hydrogen peroxide or a reduced coenzyme from the triglycerides contained in the very low density lipoprotein and the intermediate density lipoprotein or in the very low density lipoprotein, and

2'. measuring the hydrogen peroxide or reduced coenzyme generated by the reaction 1'.

2. The method according to claim 1, wherein the second selective reaction promoter is an ether or ester compound of a polyoxyalkylene.
3. The method according to claim 2, wherein  $m/n$  ratio is in the range of 1.1 to 1.2, where  $m$  is the average mole number of the added polyoxyalkylene in its ether or ester compound which is used as the first selective reaction promoter and  $n$  is the average mole number of the added polyoxyalkylene in its ether or ester compound which is used as the second selective reaction promoter.
4. The method according to claim 3, wherein  $m$  is in the range of 7.7 to 18 and  $n$  is in the range of 7 to 15.
5. The method according to claim 3, wherein  $m$  is in the range of 11 to 12 and  $n$  is 10.
6. The method according to claim 1, wherein the ether or ester compound of a polyoxyalkylene which is used as the first selective reaction promoter is at least one selected from the group consisting of polyoxyalkylene straight-chain alkyl ethers, polyoxyalkylene branched-chain alkyl ethers, polyoxyalkylene straight-chain alkylphenyl ethers, polyoxyalkylene branched-chain alkylphenyl ethers, polyoxyalkylene straight-chain fatty acid esters, polyoxyalkylene branched-chain fatty acid esters, polyoxyalkylene straight-chain alkyl substituted benzoic acid esters and polyoxyalkylene branched-chain alkyl substituted benzoic acid esters.
7. The method according to claim 1, wherein the second selective reaction promoter is at least one ether or ester compound of a polyoxyalkylene selected from the group consisting of polyoxyalkylene straight-chain alkyl ethers, polyoxyalkylene branched-chain alkyl ethers, polyoxyalkylene straight-chain alkylphenyl ethers, polyoxyalkylene branched-chain alkylphenyl ethers, polyoxyalkylene straight-chain fatty acid esters, polyoxyalkylene

branched-chain fatty acid esters, polyoxyalkylene straight-chain alkyl substituted benzoic acid esters and polyoxyalkylene branched-chain alkyl substituted benzoic acid esters.

8. The method according to claim 1, wherein the polyoxyalkylene is polyoxyethylene.
9. The method according to claim 1, wherein the first selective reaction promoter is polyoxyethylene nonylphenyl ether in which the average mole number of added polyoxyethylene m is in the range of 11 to 12 and the second selective reaction promoter is polyoxyethylene nonylphenyl ether in which the average mole number of added polyoxyethylene n is 10.
10. The method according to claim 1, wherein the first step and/or the second step is carried out in the presence of a reaction assistant.
11. The method according to claim 10, wherein the reaction assistant is a polysaccharide or derivative thereof, a polyanion, a halogen ion, a metal ion, or lectin.
12. The method according to claim 1, wherein the activity of the lipoprotein lipase being present in the first step depends on the concentration of a surfactant, while that of the lipoprotein lipase being present in the second step hardly depends on the concentration of a surfactant.
13. A reagent for selective measurement of triglycerides contained in very low density lipoprotein and intermediate density lipoprotein or in very low density lipoprotein in a test sample, comprising  
a first reagent that comprises: a first selective reaction promoter, which is an ether or ester compound of a polyoxyalkylene capable of reacting lipoprotein lipase selectively with triglycerides contained in low density lipoprotein and high density lipoprotein; lipoprotein lipase; enzymes which catalyze a series of reactions leading to the generation of hydrogen

peroxide or a reduced coenzyme from glycerol; and an enzyme which catalyzes a reaction leading to the conversion of hydrogen peroxide or a reduced coenzyme into another substance, and

a second reagent that comprises a second selective reaction promoter, which is capable of reacting lipoprotein lipase selectively with triglycerides contained in very low density lipoprotein, intermediate density lipoprotein, low density lipoprotein and high density lipoprotein.

14. The reagent according to claim 13, wherein the first reagent and/or the second reagent further comprises a substance which is involved in a reaction leading to the derivation of some signal from hydrogen peroxide or a reduced coenzyme.

15. The reagent according to claim 13, wherein the second selective reaction promoter is an ether or ester compound of a polyoxyalkylene.

16. The reagent according to claim 15, wherein  $m/n$  ratio is in the range of 1.1 to 1.2, where  $m$  is the average mole number of the added polyoxyalkylene in its ether or ester compound which is used as the first selective reaction promoter and  $n$  is the average mole number of the added polyoxyalkylene in its ether or ester compound which is used as the second selective reaction promoter.

17. The reagent according to claim 16, wherein  $m$  is in the range of 7.7 to 18 and  $n$  is in the range of 7 to 15.

18. The reagent according to claim 16, wherein  $m$  is in the range of 11 to 12 and  $n$  is 10.

19. The reagent according to claim 13, wherein the ether or ester compound of a polyoxyalkylene used as the first selective reaction promoter is at least one selected from the group consisting of polyoxyalkylene straight-chain alkyl ethers, polyoxyalkylene

branched-chain alkyl ethers, polyoxyalkylene straight-chain alkylphenyl ethers, polyoxyalkylene branched-chain alkylphenyl ethers, polyoxyalkylene straight-chain fatty acid esters, polyoxyalkylene branched-chain fatty acid esters, polyoxyalkylene straight-chain alkyl substituted benzoic acid esters and polyoxyalkylene branched-chain alkyl substituted benzoic acid esters.

20. The reagent according to claim 13, wherein the second selective reaction promoter is at least one ether or ester compound of a polyoxyalkylene selected from the group consisting of polyoxyalkylene straight-chain alkyl ethers, polyoxyalkylene branched-chain alkyl ethers, polyoxyalkylene straight-chain alkylphenyl ethers, polyoxyalkylene branched-chain alkylphenyl ethers, polyoxyalkylene straight-chain fatty acid esters, polyoxyalkylene branched-chain fatty acid esters, polyoxyalkylene straight-chain alkyl substituted benzoic acid esters and polyoxyalkylene branched-chain alkyl substituted benzoic acid esters.

21. The reagent according to claim 13, wherein the polyoxyalkylene is polyoxyethylene.

22. The reagent according to claim 13, wherein the first selective reaction promoter is polyoxyethylene nonylphenyl ether in which the average mole number of added polyoxyethylene m is in the range of 11 to 12 and the second selective reaction promoter is polyoxyethylene nonylphenyl ether in which the average mole number of added polyoxyethylene n is 10.

23. The reagent according to claim 13, wherein the first reagent and/or the second reagent further comprises a reaction assistant.

24. The reagent according to claim 23, wherein the reaction assistant is a polysaccharide or derivative thereof, a polyanion, a halogen ion, a metal ion, or lectin.

25. The reagent according to claim 13, wherein the activity of the lipoprotein lipase contained in the first reagent depends on the concentration of a surfactant, while that of the lipoprotein lipase contained in the second reagent hardly depends on the concentration of a surfactant.